

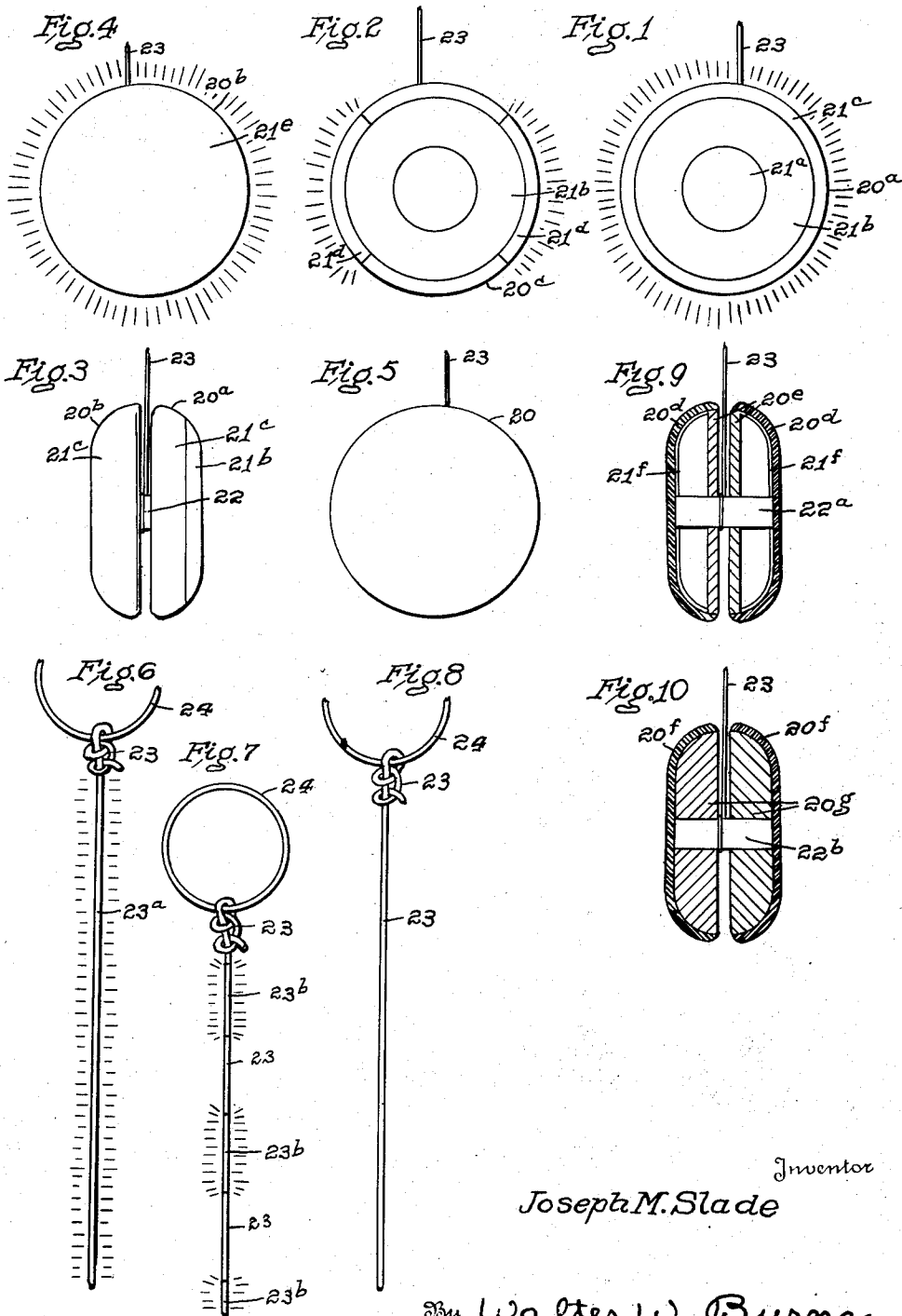
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J. M. SLADE

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ILLUSION-GIVING REVOLVING TOY

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Inventor

Joseph M. Slade

By Walter W. Burns

Attorney

1

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ILLUSION-GIVING REVOLVING TOY

Joseph M. Slade, Winter Park, Fla.

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This invention relates to toys and has particular relation to that type of toy which has come to be known as the Yo-yo.

With the usual toy of the type known as the Yo-yo, the pleasure derived by the person operating it comes from seeing its return to the hand after being dropped, this action being due to the absorption of the energy taken up on the outward or downward trip, in winding up the string or cord on the upward return trip. But the charm of the device is lost as night comes on, since the Yo-yo cannot be seen.

The primary object of this invention is the provision of a new and improved Yo-yo toy.

Another object of the invention is the provision of an improved Yo-yo toy which has a luminous surface.

A further object of the invention is the provision of an improved Yo-yo toy which has a luminous surface and a luminous string or cord which will, in the dark, give the appearance of a line of fire emerging from a fire ball when the Yo-yo toy is descending and the appearance of taking up or absorbing the line of fire as the Yo-yo toy ascends.

A still further object of the invention is the provision of an improved Yo-yo toy whereon luminous paint of different colors is on opposite sides so that as the Yo-yo reaches its upper position and turns, a different color will be presented to the view of the observer.

Another and further object of the invention is the provision of a Yo-yo toy having a string or cord with luminous and non-luminous sections.

Another and still further object of the invention is the provision of an improved Yo-yo toy having side body member sections with radially arranged sections of luminous material.

Still another and further object of the invention is the provision of such a toy, which when given luminous properties, may be made to produce, in the dark, illusions which to the observer will give impressions of an occult nature.

Other and further objects of the invention will be apparent from a reading of the complete specification.

Referring to the drawing where embodiments of the invention are illustrated,

Fig. 1 is a face view of one side of the Yo-yo toy with my invention applied.

Fig. 2 is similar to Fig. 1 but with one luminous ring having interrupted portions.

Fig. 3 is a view taken at 90° to Fig. 1 and from the left.

Fig. 4 is a back view of the Yo-yo toy of Fig. 1 showing the face covered with a luminous surface.

Fig. 5 is a showing of one side of the Yo-yo toy having no luminous surface.

Fig. 6 is an enlarged elevation of the cord having its whole surface showing luminosity.

Fig. 7 is an enlarged view of a cord similar to that of Fig. 6 but having luminosity in sections only.

2

Fig. 8 is an enlarged view of a cord similar to that of Figs. 6 and 7 but having no luminosity.

Fig. 9 is a cross section of a modified form of the invention.

Fig. 10 is a cross section of another form of the invention.

In the specification and drawing, the same reference characters are used for the same parts while similar reference characters with different letter exponents are used for similar parts with different luminosity decorations.

The basic construction of the Yo-yo toy used to illustrate my invention may be of the usual solid wooden type halves, as illustrated with a hub made of a dowel pin or it may be of any suitable shape or construction. For example, it may be hollow and of glass and plastic, as shown in Figs. 9 and 10 or with the outer shell made of some luminous material. It is to be understood that any one of the illustrated cords may be used with any of the Yo-yo body constructions in a combination to suit the whim of the manufacturer or user. The same may be said for the constructions of the halves of the body portion and which have different or no luminous qualities.

Referring to Fig. 1 particularly, 20a designates one of the halves of the toy. This part 20a is provided with a surface which shows a luminous material having portions emitting light of different characteristics spaced radially. If the spacings of the luminous material are made circumferentially, when the toy rotates on its axis, it will be obviously true that the effect on the eye will be a blending of the whole, while when spaced radially, the characteristics such as colors will be distinct and show concentrically. In Fig. 1, there are illustrated three characteristics. In the center I have placed a circle of no luminous material as at 21a, which would cause this to be unseen in the dark. Outside of this circle, I have illustrated an annular ring 21b having a luminous characteristic which may be of one color and outside of the ring 21b, I have a luminous ring 21c. If desired, one or more of such rings, as 21d, may be made with interrupted sections which would show dark spots when the Yo-yo stops at its highest points, as shown in Fig. 2.

In Fig. 4 is shown a construction wherein the whole surface of the side member 20b is provided with a luminous characteristic 21e which may be of any of the colors of which luminous material may be made.

In Fig. 3 is shown the side view of a Yo-yo toy with the halves 20a and 20b secured together at their centers by the hub member 22. The cord 23 is secured to the hub 22 so that when the cord is held lightly and the body of the Yo-yo is turned by the other hand, the cord 23 will be wound on the hub 22. When used, the free end is held in the hand with the cord 23 wound on the hub 22. By now holding the end of the cord and throwing the body of the Yo-yo toy away from the hand, the toy is made to turn as the cord unwinds from the hub. As it reaches the end of the unwinding operation, the body of the toy continues to turn, rewinding the cord on the hub 22 in the opposite direction. And as the hub rewinds the cord, the body of the toy is returned to the hand. Often, probably due to the twisting of the windings in the cord, the body of the toy will make a partial turn as it reaches or nearly reaches the hand. This is particularly advantageous in the present invention as will later appear.

The cord 23 may be entirely of or be surfaced by a luminous material 23a as illustrated in Fig. 6 or it may have luminous sections 23b as illustrated in Fig. 7. By way of variation, the cord may have no part with a luminous surface as illustrated in Fig. 8.

As is well-known in the art, luminous coatings and most luminous substances used in the arts are first ex-

posed to a bright sunlight or lamp light from which they absorb energy which is given out later as luminosity.

In the use of this invention, a ring 24 is provided at the end of the cord for convenience in holding the cord in the hand. When the toy is thrown from the hand, when operated in the dark, the luminosity given out by the body, gives the impression of a ball of fire moving from and toward the hand when the surface of the side 20b is toward the operator. If both sides are of the side 20b type, the body of the toy, if of the proper shape, may give the appearance of a complete ball of fire, its above-referred-to turns not changing the general appearance. When however, one of the sides as 20a is used with one side as 20b, as illustrated in Fig. 3, a changing effect is produced, first showing one side and then the other.

When one side or both sides is like the showing in Fig. 2, about the same effect is obtained by the body member as by the constructions of Figs. 1 and 2, with the exception that when the body of the toy stops rotating as at the top of the movement, there is a flash of the luminous portions as it stops, followed by the concentric ring appearance when in rotation.

If desired, one half of the toy may be made without luminosity as shown at 20 in Fig. 5.

In this invention, the luminous cord performs an important role when used. For example, when used with both sides 20b of the body as illustrated in Fig. 4, and with a cord such as is shown in Fig. 6, the appearance is given of a ball of fire giving out a line of fire during the downward stroke and of taking in or absorbing the line of fire during the upward or return movement.

When the cord 23 as illustrated in Fig. 7 is used, there is the appearance of a line of dashes of fire being emitted from the ball of fire during the outward movement and immediately being taken up on the return movement. Various other effects may be produced by varying the type and colors of the luminous agents used. These variations make the toy desirable from a child's standpoint, since the variation in the visual results attracts the child's interest.

It is to be understood that the details of construction of the Yo-yo toy which do not adversely affect the visual effect may be varied in the interest of economy or permanence. For example, I have provided for a variation in construction and illustrated the same in Fig. 9. Here, a shell is provided for each side portion. This shell member may be made of glass or of any of the well-known or suitable plastics which may be transparent or translucent to pass light from a coating 21f on its interior surface. To form the surface of the wall of the groove between the two side members, filler members 20e are provided. These may be of a suitable plastic or any other suitable material. They may be secured in place by any suitable means as by resin or other glue suitable for the material used in making the filler members 20e. The filler members are provided with holes centrally located and of a size to receive the hub member which is suitably glued in place. It is to be understood that the coating 21f may be varied as already described for the outside coverings, to produce the desired visual results.

Another variation which may be used is illustrated in Fig. 10. In this figure, there are provided shell members 20f which in their makeup contain luminous material so that no coating is necessary. Filler members 20g are provided to close the open ends of the shell members 20f and to provide for the walls of the groove for contact of the cord 23. The hub member 22b is in contact with an opening in each of the members 20g and provides for the support for the end of the cord 23.

It has been found that in actual practice, this invention has been very pleasing to the users, particularly to children.

While several variations of this invention have been described and illustrated, it is to be understood that the disclosures are distinctly illustrative, are not to be considered as limiting the invention and its use and that modifications and changes may be made without departing from the spirit of the invention and within its scope as claimed.

Having described my invention, what I claim is:

1. An illusion-giving revolving toy having a body member comprising two side portions and a hub portion holding the side portions together, one of the side portions having luminous material of different colors spaced radially about the axis, a cord secured to the hub portion and having luminous material showing at its surface.

2. An illusion-giving revolving toy having a body member comprising two side portions and a hub portion holding the two side portions together, one of the side portions having luminous material of different colors spaced radially about the axis, and a cord secured to the hub portion having sections with luminous material showing at its surface and having other sections with non-luminous surfaces.

3. An illusion-giving revolving toy having a body member comprising two side portions and a hub portion, and an operating cord secured to the hub portion, the cord having luminous material showing at its surface substantially throughout its length.

4. An illusion-giving revolving toy having a body member comprising two side portions and a hub portion, and an operating cord secured to the hub portion, the cord having luminous material showing in an interrupted line at its surface substantially throughout the length of the cord which is wound onto and unwound from the hub during use of the toy, between the end gripped by the user's hand and its point of attachment to the hub.

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